We claim:

1. A system with enhanced water flux through a filter membrane, the system comprising

an electromagnetic radiator which produces high-power, pulsed blackbody, deep-ultraviolet radiation, the UV reactor having at least one fluid inlet and at leaset one fluid outlet and having at least one treatment chamber;

a filtration membrane, the filter membrane disposed adjacent the at least one fluid outlet of the electromagnetic radiator to filter the water irradiated with the plulsed blackbody, deep-UV irradiation, wherein the precipitation of inorganic molecules and organically complexed minerals, partial or complete mineralization of organic molecules and the deactivation or destruction of microbes caused by the oxidizing species reduce the transmembrane pressure.

2. The system of Claim 1 wherein the filtration membrane constitutes a microfiltration membrane.

3. The system of Claim 1 wherein the filtration membrane constitutes of a plurality of membranes.

4. The system of Claim 1 wherein the oxidation of water matrix by the pulsed blackbody UV yields ozone, hydrogen peroxide, and hydroxyl radicals.

5.. The system of Claim 1 further comprising pump and associated valves for backwashing the filteration membrane.

///

6. The system of Claim 1 further cormprising a pre-filter disposed between the electromagnetic radiator and the inlet to the filter membrane.

7. The system of Claim 1 in which the electromagnetic radiator comprises a lamp which develops a radiant excitance of between about 40,000 W/cm^2 to about 170,000 W/cm^2.

8. The system of Claim 1 in which the electromagnetic radiator comprises a lamp which develops a peak power output of between about 2 MW to about 6 MW.

9. The system of Claim 1 in which the electromagnetic radiator comprises a lamp which radiates electromagnetic energy at wavelengths between about 185 nm to about 3,000 nm.

10. The system of Claim 9 in which about 38 percent to about 52 percent of the output electromagnetic energy has wavelengths in the range of between about 185 nm to about 400 nm.

11. The system of Claim 1 in which the electromagnetic radiator is pulsed at a rate of between about 0.1 to about 30.0 pulses per second.

12. A method for enhancement of flux through a hollow fiber-type filter membrane, the method comprising the following steps:

treating the water to be filtered by exposure to pulsed blackbody, deep-UV electromagnetic radiation prior to purifying the water with the hollow fiber-type main filter membrane to prevent fouling of the membrane by the group of contaminants of water consisting of organic molecules, metal ions and complexed minerals.

13. The method of Claim 12 further comprising the step of backwashing the main filtration membrane.

14. The method of Claim 13 in which the step of treating the water with radiation lasts for 30 minutes.

15. The method of Claim 12 further cormprising the step of pre-filtering the water prior to filtration of the water through the main filter membrane.

16. The method of Claim 12 in which the electromagnetic radiation develops a radiant excitance of between about 40,000 W/cm^2 to about 170,000 W/cm^2.

17. The method of Claim 12 in which the electromagnetic radiation develops a peak power output of between about 2 MW to about 6 MW.

18. The method of Claim 12 in which the electromagnetic radiation has wavelengths between about 185 nm to about 3,000 nm.

19. The method of Claim 13 in which about 38 percent to about 52 percent of the electromagnetic energy has wavelengths in the range of between about 185 nm to about 400 nm.

20. The method of Claim 12 in which the electromagnetic radiation is pulsed at a rate of between about 0.1 to about 30.0 pulses per second.